

Brief report

## Psychosocial morbidity and its correlates in cancer patients of the Mediterranean area: findings from the Southern European Psycho-Oncology Study

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### Abstract

**Background:** A few and partial data are available on psychosocial morbidity among cancer patients in Mediterranean countries. As a part of a more general investigation (Southern European Psycho-Oncology Study—SEPOS), the rate of psychosocial morbidity and its correlation with clinical and cultural variables were examined in cancer patients in Italy, Portugal and Spain.

**Methods:** A convenience sample of cancer outpatients with good performance status and no cognitive impairment were approached. The Hospital Anxiety–Depression scale (HAD-S), the Mini-Mental Adjustment to Cancer scale (Mini-MAC), and the Cancer Worries Inventory (CWI) were used to measure psychological morbidity, coping strategies and concerns about illness.

**Results:** Of 277 patients, 34% had pathological scores (“borderline cases” plus “true cases”) on HAD-S Anxiety and 24.9% on HAD-S Depression. Total psychiatric “caseness” was 28.5% and 16.6%, according to different HAD cut-offs (14 and 19, respectively). Significant relationships of HAD-S Anxiety, HAD-S Depression, HAD-S Total score, with Mini-MAC Hopeless and Anxious Preoccupation, and CWI score were found. No differences emerged between countries on psychosocial morbidity, while some differences emerged between the countries on coping mechanisms. Furthermore, Fatalism, Avoidance and marginally Hopeless were higher compared to studies carried out in English-speaking countries.

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**Limitations:** The relatively small sample size and the good performance status prevent us to generalize data on patients with different cancer sites and advanced phase of illness.

**Conclusions:** One-third of the patients presented anxiety and depressive morbidity, with significant differences in characteristics of coping in Mediterranean countries in comparison with English-speaking countries.

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## 1. Introduction

Several studies have shown that 40% to 50% of cancer patients report psychiatric disorders, especially depression (Sellick and Crooks, 1999). Increased length of stay in the hospital (Prieto et al., 2002), maladaptive coping (Watson et al., 1991), poor quality of life (Grassi et al., 1996), poor response to chemotherapy (Walker et al., 1999), risk of suicide (Henriksson et al., 1995), and risk of recurrence of cancer (Watson et al., 1999) have been related to psychosocial morbidity.

While cultural issues have been indicated as important variables to be considered when evaluating psychosocial aspects of cancer (Chambers, 2000; Holland, 2004), a few data are available in the Mediterranean area, where problems in doctor–patient communication and paternalistic attitudes represent major obstacles in eliciting psychosocial problems secondary to cancer (Arraras et al., 1995; Mystadikou et al., 1996; Grassi et al., 2000).

In order to extend the knowledge on this topic, the Southern European Psycho-Oncology Study (SEPOS) was set up. The aims were: (i) to examine the rate of psychosocial morbidity and related variables in cancer patients; (ii) to rate the ability of oncologists to detect their patients' psychosocial morbidity; and (iii) to develop and apply a training model to improve doctors' skills in recognizing psychological disorders. In the present study, findings relative to the first aim are reported.

## 2. Methods

The study was conducted in three countries of the European Union, namely Italy (Hospital S. Anna, Ferrara), Spain (Hospital Duran i Reynals, Barcelona) and Portugal (Hospital S. José, Lisbon), and in a non-

EU country (Switzerland, Lugano Hospital)<sup>2</sup>. A convenience sample of cancer outpatients meeting the following criteria was recruited: an age between 18 and 70 years; a diagnosis of cancer between 6 and 18 months; a Karnofsky Performance Status scale  $\geq 80$  (Karnofsky and Burchenal, 1949); and no cognitive deficits due to disease or treatment. The study was approved by the ethical committee or related boards of the hospitals and each patient gave his/her written consent to participate.

The Hospital Anxiety–Depression scale (HAD-S) (Zigmond and Snaith, 1983) was used to assess anxiety and depression. According to Carroll et al., 1993, scores between 8 and 10 on Anxiety and Depression subscales indicate “borderline” cases, while scores  $\geq 11$  identify “clinical” “cases”. The cut-off scores of 14 and 19 on the HAD-S Total were used to evaluate “likely psychiatric caseness” (Ibbotson et al., 1994) and “caseness” (Razavi et al., 1990), respectively.

The Mini-Mental Adjustment to Cancer scale (Mini-MAC) (Watson et al., 1994) was used to assess coping to cancer, namely Hopeless, Fighting Spirit, Anxious Preoccupation, Fatalism, and Avoidance. Provisional cut-off scores on Anxious Preoccupation and Hopeless (mean score  $\pm 1$  SD) were used to assess maladaptive coping (Watson et al., 1989).

A modified version of the Cancer Worries Inventory (CWI) (D'Errico et al., 1999) was used to rate the main preoccupations caused by cancer (e.g. physical and emotional problems, relational worries).

Student's *t*-test, ANOVA, Pearson's *r* correlation test, and chi-square test were used when appropriate.

<sup>2</sup> Data from Switzerland are still in progress and are not reported here.

### 3. Results

Of 287 patients participating, data were available for 277 (Italy,  $n=119$ ; Portugal,  $n=90$ , Spain,  $n=68$ ). The patients' socio-demographic and clinical characteristics are reported in Table 1. Portuguese patients were the oldest ( $60.06 \pm 11.16$  years) and Spanish the youngest ( $53.82 \pm 15.55$  years) ( $F=4.9$ ,  $df,2$ ,  $p=0.008$ ). There was a higher prevalence of males in the Spanish (57.4%) than in the Portuguese group (10%) ( $\chi^2=44.96$ ,  $df,2$ ,  $p=0.001$ ). Education was higher among Spanish (mean  $11.88 \pm 6.37$  years) and lower among Portuguese patients ( $5.09 \pm 3.18$  years)

( $F=39.5$ ,  $df,2$ ,  $p=0.001$ ). Significant differences were also reported on stage of illness, with the highest prevalence of metastatic patients in Italy (32.7%) and the lowest in Portugal (3.8%) ( $\chi^2=30.96$ ,  $df,4$ ,  $p=0.001$ ).

#### 3.1. Psychosocial morbidity and maladaptive coping

Forty-seven subjects (17%) proved to be “clinical cases” on HAD-S Anxiety and 25 (9%) on HAD-S Depression (cut-off score=11). A further group of patients were “borderline cases” (HAD-S score 8–10), specifically 47 (17%) on HAD-S Anxiety and 44 (15.9%) on HAD-S Depression, yielding a total of 94 patients (34%) with anxiety and 69 (24.9%) with depression. On the HAD-S Total, 79 subjects (28.5%) were “likely psychiatric cases” (cut-off=14), and 46 (16.6%) were “cases” (cut-off=19).

Maladaptive coping was found in 94/277 patients (33.93%), with 58 (20.94%) reporting high scores on Anxious Preoccupation and 36 (13%) on Hopeless.

Significant correlations were found between HAD-S and both CWI Total and Mini-MAC Hopeless and Anxious Preoccupation (see Table 2 for details).

#### 3.2. Correlation with other variables

Females reported higher scores on the Mini-MAC Anxious Preoccupation ( $16.96 \pm 5.41$  vs.  $19.23 \pm 5.23$ ,  $t=3.2$ ,  $p=0.002$ ) and Fatalism ( $14.34 \pm 2.72$  vs.  $15.56 \pm 3.1$ ,  $t=3.03$ ,  $p=0.003$ ) than males. No difference was found on any psychological measure according to stage and treatment. Breast cancer patients ( $n=141$ , 50.9%) did not differ from the group of patients affected by other cancers ( $n=136$ , 49.1%) on HAD-S “caseness”.

A similar prevalence was found between the three centres on borderline and clinical anxiety ( $\chi^2=6.71$ ,  $df,4$ ,  $p=0.15$ ), borderline and clinical depression ( $\chi^2=7.08$ ,  $df,4$ ,  $p=0.13$ ), and total “caseness” (HAD-S>14,  $\chi^2=0.66$ ,  $df,2$ ,  $p=0.99$ ; HAD-S>19,  $\chi^2=0.88$ ,  $df,2$ ,  $p=0.64$ ). Italian patients reported marginally higher scores on HAD-S Depression ( $F=3.63$ ,  $df,2$ ,  $p=0.028$ ) and marginally lower scores on HAD-S Anxiety ( $F=3.73$ ,  $df,2$ ,  $p=0.025$ ). Portuguese patients reported higher scores on the Mini-MAC Fighting Spirit ( $F=4.55$ ,  $df,2$ ,  $p=0.01$ ), Fatalism ( $F=26.01$ ,

Table 1  
Socio-demographic and clinical data of the patients

Sex	
Male	77 (27.8%)
Female	200 (72.2%)
Age (years)	$57.46 \pm 12.59$
Education	
No education	8 (2.8%)
≤8 years	154 (55.6%)
13 years	60 (21.66%)
>18 years	44 (15.88%)
no information	11 (3.97%)
Marital status	
Never-married	26 (9.4%)
Separated/divorced	21 (7.6%)
Married	205 (74%)
Widowed	24 (8.7%)
Unknown	1 (0.4%)
Occupation	
Employed	83 (30%)
Unemployed	7 (2.5%)
Housewives	39 (14.1%)
Retired	126 (45.5 %)
Students	2 (0.7%)
Other	17 (6.1%)
Unknown	3 (1.1%)
Cancer site	
Gastrointestinal	62 (22.4%)
Blood	30 (10.8%)
Genito-urinary	18 (6.5%)
Breast	141 (50.9%)
Respiratory	12 (4.3%)
Skin	2 (0.7%)
Other	12 (4.3%)
Stage	
Local disease	133 (48%)
Loco-regional	95 (34.3%)
Metastatic	49 (17.7%)

Table 2

Correlation between the psychological measures

	HAD-S Anxiety	HAD-S Depression	HAD-S total	Fighting Spirit (FS)	Hopeless (H)	Fatalism (F)	Anxious Preoccupation (AP)	Avoidance (Av)
HAD-S Depression	0.57**							
HAD-S total	0.89**	0.88**						
FS	−0.06	−0.34*	−0.22*					
H	0.51**	0.54**	0.59**	−0.28*				
F	−0.01	−0.09	−0.06	0.41**	−0.01			
AP	0.61**	0.45**	0.60	−0.01	0.54**	0.15		
Av	0.11	−0.07	−0.02	0.28*	0.04	0.35*	0.21	
CWI	0.61**	0.50**	0.63	−0.12	0.53**	−0.01	0.57**	0.05

\*  $p=0.01$ .\*\*  $p=0.001$ .

$df, 2, p=0.001$ ), and Avoidance ( $F=6.24, df, 2, p=0.01$ ) (Table 3).

In comparison with the English normative data on the Mini-MAC (Watson, personal communication), higher scores on Fatalism ( $15.25 \pm 3.05$  vs.  $13.76 \pm 2.91$ ,  $t=6.86$ ,  $p=0.001$ ), Avoidance ( $12.04 \pm 3.35$  vs.  $9.49 \pm 2.5$ ,  $t=12.29$ ,  $p=0.001$ ), and, marginally, Hopeless ( $12.63 \pm 5.03$  vs.  $11.96 \pm 3.91$ ,  $t=2.11$ ,  $p=0.036$ ) were found in our study.

#### 4. Discussion

This is the first investigation comparing psychosocial data among cancer patients in the Mediterranean area.

Approximately one third of the patients were “cases” or “likely cases”, as far as anxiety and depression are concerned. These data are similar to

what reported by Moorey et al. (1991) who found a 27% prevalence of HAD-S anxiety and a 20.1% prevalence of depression, while Carroll et al. (1993) pointed out a prevalence of 42% and 8.1%, respectively. In line with Razavi et al.’s (1990) study, “caseness” (HAD-S Total) ranged between 16% (probable major psychiatric disorder) and 28% (general psychiatric “caseness”). Taken together, our data confirm that psychosocial morbidity is a significant clinical problem in Southern European cancer patients.

A second result was that hopelessness and anxious preoccupation were the most significant coping styles associated with psychosocial morbidity. This is in agreement with data showing that both pessimistic responses and extreme focusing on illness are indicators of maladjustment to cancer (Watson et al., 1991). In contrast with previous research (Greer et al., 1990), the role of fighting spirit was not significant in

Table 3

Mean (and standard deviation) for the single psychological measures in the total sample and according to country

Measures	Total ( $n=277$ )	Italy ( $n=119$ )	Portugal ( $n=90$ )	Spain ( $n=68$ )	$F$	$p$
HAD-S						
Anxiety	6.48 (4.27)	5.57 (3.86)	7.21 (4.35)	6.86 (4.59)	3.63	ns
Depression	4.62 (4.11)	5.41 (4.50)	4.10 (3.66)	4.07 (3.95)	3.73	ns
Total score	11.1 (7.41)	10.99 (7.66)	11.35 (7.26)	10.94 (7.46)	0.1	ns
Mini-MAC						
Fighting Spirit	12.62 (2.21)	12.19 (2.30)	13.10 (2.24)	12.71 (1.86)	4.55	0.01
Hopeless	12.63 (5.03)	13.24 (5.76)	12.04 (4.06)	12.35 (4.79)	1.60	ns
Fatalism	15.25 (3.05)	14.59 (3.01)	16.95 (2.68)	14.05 (2.59)	26.01	0.001
Anxious Preoccupation	18.65 (5.81)	18.93 (6.48)	19.18 (5.54)	17.38 (4.65)	2.16	ns
Avoidance	12.04 (3.35)	11.39 (3.72)	13.00 (2.87)	11.89 (2.97)	6.24	0.002
Cancer Worries Inventory	13.49 (10.65)	12.43 (10.13)	14.28 (11.55)	14.19 (10.25)	0.98	ns

this study. However, more recently it has been shown that hopelessness, rather than fighting spirit, was a key factor in influencing cancer patients' quality of life and possibly survival (Watson et al., 1999). Furthermore, hopelessness and anxious preoccupation were found to be the only factors improving after antidepressant treatment among breast cancer patients (Grassi et al., 2004).

As expected, psychosocial morbidity was associated with the extent of concerns about illness. This confirms the relationship of worries with psychological maladjustment (Spencer et al., 1999; Mathews et al., 2002) and underscores the need for an early and routine assessment of the impact of cancer on the patients and their emotional response (Maguire et al., 1996).

Regarding the role of cultural factors, minor differences were found between the participating centres on psychosocial morbidity (i.e. anxiety, depression, and "caseness") and cancer-related worries. More data are necessary to interpret the differences in coping (Mini-MAC) between Portuguese patients, on the one hand, and Italian and Spanish, on the other. Education, gender and age can be possible explanatory factors, as well as more specific cultural variables which need to be studied in more detail. Likewise, further research is necessary to understand the differences (higher fatalism, avoidance and hopelessness) between Southern and Northern European patients.

Important limitations should be mentioned. First, psychosocial morbidity was not evaluated by using a structured clinical interview, which could have given more detailed data. Second, the small size of the sample and the good performance status prevent us from generalizing the results to patients in an advanced phase of illness and poorer performance status. Third, even if the sample was representative of the centres and the regions where the study was carried out, we cannot generalize the results to the whole cancer population of the three countries. Fourth, most patients were females with a diagnosis of early breast cancer and this does not allow us to understand the role of gender and medical variables on psychosocial morbidity in this specific cultural setting. Lastly, variables related to religious beliefs, namely the Catholic tradition in Mediterranean countries, were not taken into consideration and should be explored in future studies.

To conclude, at least one third of Southern European cancer patients presented clinical anxiety and depression, which were associated with maladaptive coping and worries about their disease. The cultural aspects of this geographical area should be the focus of further studies both in educational and clinical research.

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